

Claims

1. A process for preparing stabilised starches and said process is comprising the following steps:
 - a. Treating starch with an effective amount of reactant whereby organoleptic impurities and/or precursors of organoleptic impurities are converted into hydrolysed and/or oxidatively degraded organoleptic impurities and/or precursors of organoleptic impurities, and
 - b. Bleaching starch or starch and hydrolysed and/or oxidatively degraded organoleptic impurities and/or precursors of organoleptic impurities,
 - c. Recovering stabilised starch.
2. A process according to claim 1 characterised in that bleaching of step b) is performed with 100-8000 ppm active chlorine based on dry substance of starch.
3. A process according to claim 2 characterised in that bleaching of step b) is performed at a temperature of from 5°C- 60°C, preferably from 10 – 55°C.
4. A process according to claim 2 or 3 characterised in that bleaching of step b) is performed at pH from 3 to 12, preferably from 7.5 to 11.5, more preferably from 8.5 to 11.
5. A process according to anyone of claims 2 to 4 characterised in that bleaching of step b) is performed during a time between the dosing time of active chlorine up to 24 hours.
6. A process according to anyone of the claims 2 to 5 characterised in that said process is comprising the following steps:
 - a. Treating starch containing from 0.2 to 0.4% w/w protein with an effective amount of reactant whereby organoleptic impurities and/or precursors of organoleptic impurities are converted into hydrolysed and/or oxidatively

degraded organoleptic impurities and/or precursors of organoleptic impurities, and

- b. Bleaching said starch or starch and hydrolysed and/or oxidatively degraded organoleptic impurities and/or precursors of organoleptic impurities in presence of from 500 to 4000 ppm active chlorine based on dry substance of starch, at pH of 3.0 to 11.5, preferably pH of 8.5 to 10.5, at a temperature from 5 to 60°C, preferably from 10 to 55°C, for a time between the dosing time of the active chlorine up to 24 hours,
- c. Recovering stabilised starch.

7. A process according to anyone of the claims 2 to 5 characterised in that said process is comprising the following steps:

- a. Treating starch containing from 0.25 to 0.30% w/w protein with an effective amount of reactant whereby organoleptic impurities and/or precursors of organoleptic impurities are converted into hydrolysed and/or oxidatively degraded organoleptic impurities and/or precursors of organoleptic impurities, and
- b. Bleaching said starch or starch and hydrolysed and/or oxidatively degraded organoleptic impurities and/or precursors of organoleptic impurities in presence of from 1000 to 4000 ppm active chlorine based on dry substance of starch, at pH of 8.5 to 11, preferably pH of from 9.0 to 10.0, at a temperature from 10 to 55°C, for a time between the dosing time of the active chlorine up to 24 hours,
- c. Recovering stabilised starch.

8. A process according to anyone of claims 1 to 7 characterised in that the treatment of step a) is performed with a reactant selected from the group consisting of proteases, lipases, hydrogen peroxide, chlorine-free oxidants, alkaline solution, alkaline aqueous solution, and mixtures thereof, preferably protease, more preferably endoprotease.

9. A process according to anyone of claims 1 to 8 characterised in that said process is comprising the following steps:
 - a) Treating starch with a protease or a mixture of proteases which is at least containing an endoprotease, and said protease or mixture of protease is added in an effective amount to convert organoleptic impurities and/or precursors of organoleptic impurities into hydrolysed and/or oxidatively degraded organoleptic impurities and/or precursors of organoleptic impurities,
 - b) reacting starch or starch and hydrolysed and/or oxidatively degraded organoleptic impurities and/or precursors of organoleptic impurities with active chlorine,
 - c) washing, and
 - d) optionally drying.
10. Stabilised starch obtainable according to the process of anyone of claims 1 to 9 with improved viscosity stability and/or improved setting properties upon cooling in comparison to starch solely treated with active chlorine.
11. Stabilised waxy starch obtainable according to the process of anyone of claims 1 to 9 with improved viscosity stability in comparison to waxy starch bleached with active chlorine.
12. Stabilised regular corn starch obtainable according to the process of anyone of claims 1 to 9, with improved setting properties upon cooling in comparison to native corn starch.
13. Use of stabilised starch according to anyone of claims 10 or 12 in feed, food, pharma products and cosmetic products.
14. Use according to claim 13 characterised in that food is selected from the group consisting of sauces, spreads, dressings, soups, convenience food, stabilisers for meat products, bakery products, fillings and creams.

15. Use according to claim 13 characterised in that pharma products are selected from the group consisting of tablets, and dusting powder.
16. A sauce containing from 1.5% to 4% stabilised starch according to anyone of claims 10 or 12.
17. Tablets containing from 3% to 80% stabilised starch according to anyone of claims 10 or 12.